ENHANCED DIAGNOSTIC POTENTIAL OF PROSTATE-SPECIFIC ANTIGEN EXPRESSING CELLS

Abstract of the Invention

The present invention is directed to sensitive and specific methods and kits for the detection of prostate cancer in a patient. The invention uses RT-PCR to detect the expression or change in expression of PSA in epithelial cells enriched from whole blood. The methods and kits on the invention represent a a significant improvement over previous methods of CaP diagnosis. According to one embodiment, prostate epithelial cells are isolated from blood and the RNA subjected to RT-PCR. The resulting cDNA is subjected to traditional PCR amplification with primers able to distinguish between the genomic copy of the gene and the cDNA copy resulting from CaP gene expression. This method provides an assay which is more sensitive, specific and reproducible as compared to conventional methods. Results disclosed herein demonstrate a correlation between the presence of PSA-expressing prostate epithelial cells with cancer recurrence which provides a diagnostic tool for the early detection of prostate disease.